

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph at page 35, lines 5-18, with the following amended paragraph:

In an embodiment, the server 400 performs a short-cut replica creation to transfer data from a nearby existing replica. To create a replica of file F , node S first discovers the file's gold replicas in the directory 410 entry during the path-name lookup. Node S then requests the file contents from the gold replica closest to node S (e.g., say gold replica P (417) on server 450). Gold replica P then finds a replica closest to node S among its own graph neighbors (e.g., say replica X (418) on server 455, which may be gold replica P itself) and forwards the request to replica X , which in turn sends the contents to node S . At this point a replica 405 of file F has been created on node S and node S replies to the user and lets the user start accessing the local replica of F (via client 425).

Please replace the paragraph at page 36, lines 8-28, with the following amended paragraph:

The node S (400) satisfies all these goals simultaneously, as a replica can have multiple edges. Typically, the node S (via replication engine 115) chooses three types of peers for the new replica. First, node S adds an edge to a random gold replica, preferably one from a different region than node S , to give that gold replica more variety of regions in its neighbor set. Second, node S asks a random gold replica, say e.g., gold replica P (417) on server 450, to pick the replica (among gold replica P 's immediate graph neighbors) closest to node S . The replication engine 115 in server 450 will perform the function of picking the replica closest to node S (among gold replica P 's immediate graph neighbors). In the example of Figure 15, the gold replica X (418) on server 455 is determined and picked as the replica closest to node S . Third, node S asks gold replica P to choose $m-2$ random replicas using random walks that start from gold replica P and perform a series of RPC (Remote Procedure Calls) calls along graph edges. This protocol ensures that the resulting graph is m edge- and node- connected, provided that it was m -connected before.